ANALYTICAL REPORT

1P-LSD (C23H29N3O2)

N,N-diethyl-7-methyl-4-propanoyl-6,6a,8,9-tetrahydroindolo[4,3-fg]quinoline-9-carboxamide

Remark – other NPS detected: none

Sample ID: 1322-15
Sample description: blotter - na
Sample type: test purchase /RESPONSE -purchasing
Date of sample receipt (M/D/Y): 10/28/2015
Date of entry (M/D/Y) into NFL database: 10/28/2015
Report updates (if any) will be published here: http://www.policija.si/apps/nfl_response_web/seznam.php

Substance identified (in SFC)-structure¹ (base form)

Systematic name: N,N-diethyl-7-methyl-4-propanoyl-6,6a,8,9-tetrahydroindolo[4,3-fg]quinoline-9-carboxamide
Other names
Formula (per base form): C23H29N3O2
Mₘ (g/mol): 379,22
Salt form: tartrate (and chloride ions)
StdInChIKey: JSMQOVGXBIDBIE-UHFFFAOYSA-N
Compound Class: Indolalkylamines (fe tryptamines)
Other NPS detected: none
Add.info (purity..): pure (on blotters).

¹ This report has been produced with the financial support of the Prevention of and Fight against Crime Programme of the European Union (grant agreement number JUST/2013/ISEC/DRUGS/AG/6413). The contents of this report are the sole responsibility of the National Forensic Laboratory and can in no way be taken to reflect the views of the European Commission.
² Created by OPSIN free tool: http://opsin.ch.cam.ac.uk/ DOI: 10.1021/ci100384d
Report updates

<table>
<thead>
<tr>
<th>date</th>
<th>comments (explanation)</th>
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</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Instrumental methods** (if applied) in NFL

1. **GC-MS** (Agilent): GC-method is RT locked to tetracosane (RT=9.53 min). Injection volume 1 ml and split mode (1:50). Injector temperature: 280 °C. Chromatographic separation: on column HP1-MS (100% dimethylpolysiloxane), length 30 m, internal diameter 0.25 mm, film thickness 0.25 mm. Carrier gas He: flow-rate 1.2 ml/min. GC oven program: 170 °C for 1 min, followed by heating up to 293 °C at a rate of 18 °C/min, hold for 6.1 min, than heating at 50 °C/min up to 325 °C and finally 2.8 min isothermal. MSD source EI = 70 eV. GC-MS transfer line T= 235°C, source and quadropole temperatures 280°C and 180°C, respectively. Scan range m/z scan range: from 50 (40) to 550 amu.

2. **HPLC-TOF** (Agilent): 6230B TOF with Agilent 1260 Infinity HPLC with binary pump, column: Zorbax Eclipse XDB-C18, 50 x 4.6 mm, 1.8 micron. Mobile phases (A) 0.1% formic acid and 1mM ammonium formate in water; (B) 0.1% formic acid in methanol (B). Gradient: starting at 5% B, changing to 40% B over 4 min, then to 70% over 2 min and in 5 min to 100%, hold 1 min and back to 5%, equilibration for 1.7 min. The flow rate: 1.0 ml/min; Injection volume 1 µl. MS parameters: 2GHz, Extended Dynamic range mode to a maximum of 1700 amu, acquisition rate 1.30 spectra/sec. Sample ionisation: by Agilent Jet Stream technology (Dual AJS ESI). Ion source: positive ion scan mode with mass scanning from 82 to 1000 amu. Other TOF parameters: drying gas (N2) and sheath temperature 325 °C; drying gas flow rate 6 l/min; sheath gas flow rate 8 l/min; nebulizer 25 psig; Vcap. 4000 V; nozzle 2000 V; skimmer 65 V; fragmentor 175 V and Octopole RF 750 V.

3. **FTIR-ATR** (Perkin Elmer): scan range 4000-400 cm⁻¹; resolution 4cm⁻¹

4. **GC-(MS)-IR** condensed phase (GC-MS (Agilent) & IR (Spectra analyses-Danny))
MSD source EI = 70 eV. GC-MS transfer line T= 235°C, source and quadropole temperatures 280°C and 180°C, respectively. Scan range m/z scan range: from 50 (40) to 550 amu.
IR (condensed phase): IR scan range 4000 to 650, resolution 4 cm⁻¹.

5. **IC** (anions) (Thermo Scientific, Dionex ICS 2100), Column: IonPac AS19, 2 x 250mm; Eluent: 10mM from 0 to 10 min, 10-58 mM from 10 to 40min; Flow rate: 0.25 ml/min; Temperature: 30°C; Suppressor: AERS 500 2mm, suppressor current 13mA; Inj. Volume: 25 µl
### Supporting information

<table>
<thead>
<tr>
<th>Solubility in</th>
<th>result/remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH2Cl2</td>
<td>extracted from blotter</td>
</tr>
<tr>
<td>MeOH</td>
<td>/</td>
</tr>
<tr>
<td>H2O</td>
<td>/</td>
</tr>
</tbody>
</table>

#### Analytical technique:

<table>
<thead>
<tr>
<th>Technique</th>
<th>Applied</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>GC-MS (EI ionization)</td>
<td>+</td>
<td>NFL GC-RT (min): 17.72 BP(1): 379; BP(2): 277, BP(3): 221,</td>
</tr>
<tr>
<td>HPLC-TOF</td>
<td>+</td>
<td>Exact mass (theoretical): 379, 226; measured value Δppm:; formula: C23H29N3O2</td>
</tr>
<tr>
<td>FTIR-ATR</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>FTIR (condensed phase)</td>
<td>+</td>
<td>always as base form</td>
</tr>
<tr>
<td>IC (anions)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>NMR</td>
<td></td>
<td>pending</td>
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<td></td>
</tr>
<tr>
<td>other</td>
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<td></td>
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</table>
ANALYTICAL RESULTS

MS (EI)

Scan 1435 (17.717 min): 1P-LSD_ID-1322-15-B_D1-data.ms

Abundance

IR (condensed phase)
**TOF REPORT**

Data File: 1P_LSD_1322-15_TOF.d  
Sample Name: 1P-LSD  
Sample Type: Sample  
Position: P1-D3  
Instrument Name: 6230B TOF LC-MS  
User Name: TG  
Acq Method: general-28052015-XDB-C18-ESI-poz.m  
Acquired Time: 11/2/2015 11:43:22 AM  
IRM Calibration Status: Success  
DA Method: Drugs_NFL.m  
Comment: extract in MeOH

--- End Of Report ---
Peak Integration Report

<table>
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<tr>
<th>No.</th>
<th>Time min</th>
<th>Peak Name</th>
<th>Peak Type</th>
<th>Area µS*min</th>
<th>Height µS</th>
<th>Amount mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>9.46</td>
<td>Chloride</td>
<td>BMB</td>
<td>0.55</td>
<td>2.23</td>
<td>n.a.</td>
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<tr>
<td>2.00</td>
<td>24.55</td>
<td>Tartrate</td>
<td>BMB</td>
<td>1.36</td>
<td>5.43</td>
<td>n.a.</td>
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TOTAL: 1.91 7.66 0.00

[Graph showing peak integration report]